L17 ANSWER 1 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:1220778 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 148:61498
TITLE: Physicochemical properties and membrane interactions of per(6-desoxy-6-halogenated) cyclodextrins
AUTHOR(S): Debouzy, J.-C.; Crouzier, D.; Gadelle, A.
CORPORATE SOURCE: Unite de Biophysique, Centre de Recherches du Service de Sante des Armees, La Tronche, F 38702, Fr.
SOURCE: Annales Pharmaceutiques Francaises (2007), 65(5), 331-341
CODEN: APFRAD; ISSN: 0003-4509
PUBLISHER: Elsevier Masson SAS
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Per(6-iodo-6-desoxy) cyclodextrins are synthesis intermediates used in the design of the cation chelating per(3,6-anhydro) cyclodextrins. The modifications of the properties of these mols. resulting from the nature of the halogen substituent and also the number of osidic building blocks were investigated by varying both factors, using 1H and 31P-NMR and EPR spectroscopies. These nearly water insol. mols. exhibits no complexing properties (for both ionic and apolar structures) but can be partially solubilized in micelles of detergent (SDS) and also in phospholipid vesicles. Dipolar connectivity (nOesy) NMR expts. show that they are embedded at the chain level of the micelles/vesicles, without any inclusion complex formation. Changing the number of glucose building blocks (6,7 or 8) or/and the nature of the halogen nuclei at the positions 6 strongly modify cyclodextrin affinities and membrane interactions. For instance the per(6-bromo-6-desoxy)-cyclomaltohexaose (ABR) and -cyclomalto-heptaose (BBR) exhibit a selective affinity for cobalt (apparent Ka of 250 and 790 M-1, resp.). In terms of interactions with membranes, α derivs. induce sterical hindrance at the phosphorus level while destructuring the chains. Other derivs. are located deeper and rigidify the most superficial part of the chain, suppressing the jump in membrane fluidity at transition temperature
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:1075853 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 148:11397
TITLE: Selective synthesis and ester cleavage property of 3A,2β-anhydro-3B-deoxy-3B-thio-β-cyclodextrin
AUTHOR(S): Fukudome, Makoto; Shimosaki, Kaori; Koga, Kazutaka; Yuan, De-Qi; Fujita, Kahee
CORPORATE SOURCE: Department of Molecular Medicinal Sciences, Graduate School of Biomedical Sciences, Nagasaki University, Nagasaki, 852-8521, Japan
SOURCE: Tetrahedron Letters (2007), 48(42), 7493-7497
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 148:11397
AB The title compound was synthesized by the conversion of 2A,3A-allo-epoxy-β- cyclodextrin to the 2A,3A-manno-epi-thio derivative with thiourea and subsequent ring-opening by intramol. nucleophilic substitution. Its thiol group and the distorted cavity demonstrated good synergetic effect in promoting the cleavage of m-nitrophenyl acetate but did not cooperate with each other toward the p-isomer.
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 3 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:970278 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 147:301388
TITLE: Catalyst-free preparation of anhydro sugars from aqueous sugar solutions
INVENTOR(S): Kaga, Haruo; Sasaki, Masahide; Sasaki, Komi; Narumi, Atsushi; Takahashi, Kenji; Sato, Hiroi; Haneda, Yui; Sato, Toshifumi; Kakuchi, Toyoji

PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science & Technology, Japan; Kanazawa University
SOURCE: Jpn. Kokai Tokkyo Koho, 11pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007217386	A	20070830	JP 2006-42409	20060220
PRIORITY APPLN. INFO.:			JP 2006-42409	20060220

OTHER SOURCE(S): CASREACT 147:301388
AB 1,6-Anhydrohexopyranose I, 1,6-anhydrohexofuranose II, and/or 1,4-anhydropentopyranose III are prepared by heating aqueous solns. containing water-soluble sugars for reaction under water vapor condition. Preferably, raw materials containing the water-soluble sugars are honey, treacle, molasses, starch syrup, blackstrap, or maple syrup. Thus, an aqueous glucose solution was heated at 180° and 0.1 MPa for 0.13-0.15 s to give 27% levoglucosan and 11% 1,6-anhydroglucofuranose.

L17 ANSWER 4 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:582556 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 147:188925
TITLE: A remarkable stereoselectivity switching upon solid-state versus solution-phase enantiodifferentiating photocyclodimerization of 2-anthracenecarboxylic acid mediated by native and 3,6-anhydro-γ- cyclodextrins
AUTHOR(S): Yang, Chens; Nishijima, Masaki; Nakamura, Asao; Mori, Tadashi; Wada, Takehiko; Inoue, Yoshihisa
CORPORATE SOURCE: ICORP Entropy Control Project, JST, Japan
SOURCE: Tetrahedron Letters (2007), 48(25), 4357-4360
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 147:188925
AB The enantiodifferentiating [4+4] photocyclodimerization of anthracenecarboxylic acid (AC) mediated by native, mono- and di-3,6-anhydro-γ- cyclodextrins was investigated in both aqueous solution and solid-state. The solid-state photolyses gave inherently disfavored head-to-head photodimers in much higher chemical and optical yields than in the aqueous solution
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 5 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:454963 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 146:462467
TITLE: Preparation of anhydro sugars by heating carbohydrates in organic solvents
INVENTOR(S): Kaga, Haruo; Sasaki, Masahide; Sasaki, Komi; Narumi, Atsushi; Kaneko, Noriaki; Takasugi, Tomo
PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science & Technology, Japan; Macrotech Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 12pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007106685	A	20070426	JP 2005-297133	20051012
PRIORITY APPLN. INFO.:			JP 2005-297133	20051012

OTHER SOURCE(S): CASREACT 146:462467
AB Anhydro sugars I, II, and/or III, among which levoglucosan is useful as an intermediate for antitumor agents, anti-HIV agents, etc., are prepared by heating monosaccharides, oligosaccharides, and/or their

glycosides in the presence of organic solvents. Materials of the above reaction may addnl. contain ≥1 polysaccharide-containing materials, e.g. starch, cellulose, glycogen, mannan, pulp, cereals, bagasse, etc. This method generates slight amts. of CO2, lower hydrocarbons, tars, carbonized products, etc. Thus, a mixture of glucose and sulfolane was irradiated with microwave at 240° for 4 min to give 43% levoglucosan and 16% 1,6-anhydroglucofuranose.

L17 ANSWER 6 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:369608 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 148:61684
TITLE: Cyclodextrin derivatives and cyclofructan as ocular permeation enhancers
AUTHOR(S): Schoch, Christian; Bizec, Jean-Claude; Kis, Georg
CORPORATE SOURCE: Novartis Pharma AG, Basel, 4057, Switz.
SOURCE: Journal of Inclusion Phenomena and Macrocyclic Chemistry (2007), 57(1-4), 391-394
CODEN: JIPCP5; ISSN: 1388-3127
PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The pos. influence of specific cyclodextrins and cyclofructan on the permeation of ophthalmic drugs through ocular tissues was demonstrated.
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 7 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:1234304 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 144:129163
TITLE: Acetylenic cyclodextrins for multi-receptor architectures: cups with sticky ends for the formation of extension wires and junctions
AUTHOR(S): Faiz, Jonathan A.; Spencer, Neil; Pikramenou, Zoe
CORPORATE SOURCE: School of Chemistry, The University of Birmingham, Edgbaston, B15 2TT, UK
SOURCE: Organic & Biomolecular Chemistry (2005), 3(23), 4239-4245
CODEN: OBCRAK; ISSN: 1477-0520
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:129163
AB A mono-6-O-propargyl permethylated β- cyclodextrin (I) has been prepared by two synthetic routes as a versatile building block for the construction of cyclodextrin dimers and trimers with a core junction which is potentially electron conducting. Glaser-Hay coupling of I gave β- cyclodextrin dimer, and Pd(0)-catalyzed coupling allowed the preparation of a cyclodextrin dimer with a 1,4-phenylene bridge, and a cyclodextrin trimer based on a 1,3,5-trisubstituted benzene. All compds. have been fully characterized, and in particular, detailed anal. by 2D NMR spectroscopic techniques has provided useful insight into the identities of the compds. The detailed full characterization of mono-3,6-anhydro-heptakis(2,3-O-methyl)-hexakis(6-O-methyl)-β- cyclodextrin (II), is also described. II is formed during the methylation of I, and its formation was found to be sensitive to the reaction conditions. The absorption and fluorescence spectra of the phenylene-bridged dimer and trimer are also reported. They show different properties of the excited state based on the different electronic coupling imposed by the phenylene core.
REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 8 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:642872 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 143:306467
TITLE: Synthesis of a cycloallin derivative from β-cyclodextrin: Heptakis(2,3-dideoxy-2,3-epithio]-β-cycloallin
AUTHOR(S): Fukudome, Makoto; Shiratani, Tomonori; Immel, Stefan; Nogami, Yasuyoshi; Yuan, De-Qi; Fujita, Kahee
CORPORATE SOURCE: Department of Molecular Medicinal Sciences Graduate

School of Biomedical Sciences, Nagasaki University, Nagasaki, 852-8521, Japan
SOURCE: Angewandte Chemie, International Edition (2005), 44(27), 4201-4204
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:306467
AB Heptakis (2,3-dideoxy-2,3-epithio)-β-cycloallin has been synthesized in a one-pot procedure from a β- cyclodextrin derivative Mol. modeling studies suggest that the structure of the cycloallin is inverted relative to that of regular cyclodextrins, with the sulfur atoms of the epithio groups pointing inwards to form the narrower aperture.
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 9 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:510596 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 144:89979
TITLE: High-resolution solid-state 13C NMR study of per(3,6-anhydro)-α-cyclodextrin based polymers and of their chromium complexes
AUTHOR(S): Cadars, Sylvian; Foray, Marie-Francoise; Gadelle, Andree; Gerbaud, Guillaume; Bardet, Michel
CORPORATE SOURCE: Service de Chimie Inorganique et Biologique, Departement de Recherche Fondamentale sur la Matiere Condensee, CEA-Grenoble, Grenoble, F-38054, Fr.
SOURCE: Carbohydrate Polymers (2005), 61(1), 88-94
CODEN: CAPOD8; ISSN: 0144-8617
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB High-resolution solid-state 13C NMR was employed to characterize polymers made of per-3,6-anhydro-α-cyclodextrins with 1,6-diisocyanatohexane used to bridge the macrocycles. These materials were designed because of their insoly. and their extractant properties due to the presence of the cyclodextrin rings. The properties of this new type of material appear very promising as potential extractant of different oxoanions. The properties of these materials to bind chromate or dichromate ions appear to be particularly attractive since the extraction of chromium is high and moreover there is no degradation of the polymers that can be further regenerated. These features rely mostly on qual. and quant. analyses of CP/MAS spectra. The studies of the NMR relaxation times, TCH, T1pH and TIC for the stable polymers and its metal complexes allowed obtaining valuable insights concerning the mol. sites of interactions of the polymers with the oxoanions.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 10 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:55101 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 142:162607
TITLE: Pharmaceutical compositions comprising peranhydrocyclodextrin
INVENTOR(S): Szente, Lajos; Szejtli, Jozsef; Jicsinszky, Laszlo; Kis, Georg Ludwig; Schoch, Christian
PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis Pharma GmbH
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005004922	A1	20050120	WO 2004-EP7253	20040702
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,				

NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2004255429	A1	20050120	AU 2004-255429		20040702
CA 2529290	A1	20050120	CA 2004-2529290		20040702
EP 1646405	A1	20060419	EP 2004-740601		20040702
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK					
CN 1812813	A	20060802	CN 2004-80017868		20040702
BR 2004012116	A	20060815	BR 2004-12116		20040702
US 20070042994	A1	20070222	US 2005-559524		20051206
MX 2005PA14012	A	20060302	MX 2005-PA14012		20051220
IN 2006CN00047	A	20070223	IN 2006-CN47		20060104
US 20070282013	A1	20071206	US 2007-838329		20070814
PRIORITY APPLN. INFO.:			GB 2003-15745	A	20030704
			WO 2004-EP7253	W	20040702
			US 2006-559524	A1	20060714

AB The present invention relates to a pharmaceutical composition comprising a peranhydrocyclodextrin, a drug, and a carrier, to the use of a peranhydrocyclodextrin as a drug transport enhancer (e.g. permeation enhancer), and to the use of a peranhydrocyclodextrin in the preparation of a pharmaceutical composition as a synergistic adjunctive system. Hexakis(3,6-anhydro)-α- cyclodextrin was prepared, and its effect on corneal permeation of diclofenac was examined

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 11 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER:	2004:945972 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER:	142:94036
TITLE:	2A,3A-Alloepithio-2A,3A-dideoxy-β-cyclodextrin: synthesis and application in the construction of rigid elliptical cavities with functionality at the secondary hydroxyl side
AUTHOR(S):	Fukudome, Makoto; Okabe, Yuji; Sakaguchi, Madoka; Morikawa, Hidetoshi; Fujioka, Toshihiro; Yuan, De-Qi; Fujita, Kahee
CORPORATE SOURCE:	Department of Molecular Medicinal Sciences, Graduate School of Biomedical Sciences, Nagasaki University, Bunkyo-machi 1-14, Nagasaki, 852-8521, Japan
SOURCE:	Tetrahedron Letters (2004), 45(49), 9045-9048 CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER:	Elsevier B.V.
DOCUMENT TYPE:	Journal
LANGUAGE:	English
OTHER SOURCE(S):	CASREACT 142:94036

AB 2A,3A-Alloepithio-2A,3A-dideoxy-β- cyclodextrin (I), which may serve as a novel and important intermediate for the functionalization of the secondary face of β- cyclodextrin, was prepared in 40% yield by heating 2A,3A-mannoepoxy-β- cyclodextrin and thiourea in water. Treatment of I with AgNO3 in the presence of amines afforded 3A,6A-anhydro-2A-deoxy-2A-thio-β-cyclodextrin in 73% yield. The latter is an artificial enzyme candidate with a specifically orientated thiol group and a rigid elliptical cavity.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 12 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER:	2004:650987 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER:	141:174407
TITLE:	Per(3,6-anhydro)cyclodextrin derivatives, their preparation and their use for delivery of metal elements to biological targets or for decontamination of biological targets or fluids
INVENTOR(S):	Baudin, Cecile; Perly, Bruno; Dalbiez, Jean Pierre
PATENT ASSIGNEE(S):	Commissariat a l'Energie Atomique, Fr.
SOURCE:	Fr. Demande, 47 pp.

CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2850972	A1	20040813	FR 2003-1474	20030207
FR 2850972	B1	20050311		
WO 2004071639	A2	20040826	WO 2004-FR50048	20040206
WO 2004071639	A3	20041007		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1597286	A2	20051123	EP 2004-708796	20040206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006522840	T	20061005	JP 2006-502174	20040206
US 20070148090	A1	20070628	US 2005-544680	20050804
PRIORITY APPLN. INFO.:			FR 2003-1474 A	20030207
			WO 2004-FR50048 W	20040206

OTHER SOURCE(S): MARPAT 141:174407

AB Per(3,6-anhydro)cyclodextrin I, wherein R1 represents a radical chosen among peptides, proteins, lipids, oligonucleotides, poly-nucleotides, oligosaccharides, polysaccharides, bio-polymers; R1 independently represent OH, OR3, OM, HS, SR3, OCOR3, NH2, NHR3, NR3R4, CONH2, CONHR3, CONR3R4, CN, COOR3, OCH2COOH, COOH, OSO2R3, N3; R3 and R4 are identical or different, represent hydrocarbon, aliphatic, aromatic possibly substituted by atoms of halogen which can comprise one or more heteroatoms among O, S and N; M represents a selected monovalent cation among the alkaline metal cations; R2 represent a simple connection or a spacer group and n is 6-8. These derivs. are used in particular to convey metal elements towards biol. targets or to decontaminate biol. targets or fluids. Thus, [(mono-2-O-methyl-amido)-per(3,6-anhydro)-α-cyclodextrin]-L-Ala-L-Phe-OMe ester was prepared and formed complexes with Pb2+ and Er3+ cations.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 13 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:333678 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 141:332380
TITLE: Matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. A comparison of fragmentation patterns of linear dextran obtained by in-source decay, post-source decay, and collision-induced dissociation and the stability of linear and cyclic glucans studied by in-source decay
AUTHOR(S): Bashir, Sajid; Giannakopulos, Anastassios E.; Derrick, Peter J.; Critchley, Peter; Bottrill, Andrew; Padley, Henry D.
CORPORATE SOURCE: Institute of Mass Spectrometry, University of Warwick, Coventry, CV4 7AL, UK
SOURCE: European Journal of Mass Spectrometry (2004), 10(1), 109-120
CODEN: EJMSCL; ISSN: 1469-0667
PUBLISHER: IM Publications
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In the first part of this study, fragmentation patterns from a range of dextran oligomers (containing 4-20 anhydro-glucose units) were compared using three different methods of anal. coupled with matrix-assisted laser desorption/ionization (MALDI) mass spectrometry. Collision-induced dissociation (CID), prompt in-source decay (ISD) and post-source decay (PSD) all caused cleavage of the glycosidic bonds. Both CID and, to a lesser extent, ISD caused further cleavage of pyranose rings of the individual sugar residues. There was very little cleavage of

pyranose rings detected in the PSD spectrum. Derivatization of the reducing end-groups of the oligo-dextrans with 1-phenyl-3-methyl-5-pyrazolone (PMP) restricted cleavage in the MALDI mass spectrometer to the non-reducing end and also enabled the saccharides to be separated by high-performance liquid chromatog. (HPLC) so that a single chain length could be examined as a standard Maltoheptaose was also used as a standard In the second part of the study, prompt ISD-MALDI mass spectrometry was used to compare the fragmentation of three oligo-glucans, viz. dextran, maltodextrin and γ- cyclodextrin, that have different linkages and different secondary structure. The results showed that the degree of fragmentation correlated with the degree of freedom in the saccharide chains in solution as determined by NMR. Dextran, with the most random conformation, was fragmented most whereas there was little evidence of any fragments, not even glycosidic bond breakage, from cyclodextrin, even when the laser power was increased considerably. The fragmentation pattern of maltodextrin was intermediate. The patterns of fragmentation produced by MALDI mass spectrometry, particularly where stds. are available to calibrate the spectrum and the energy of the laser is controlled, can be used to predict the type of linkage present.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 14 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:990981 CAPLUS <<LOGINID::20080331>>

DOCUMENT NUMBER: 140:52345

TITLE: Per(3,6-anhydro)cyclodextrin derivatives, their preparation, and their use for the separation or fixation of anions based on manganese and chromium

INVENTOR(S): Gadelle, Andree

PATENT ASSIGNEE(S): Commissariat A L'energie Atomique, Fr.; Centre National De La Recherche Scientifique Cnrs

SOURCE: Fr. Demande, 42 pp.
CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2840906	A1	20031219	FR 2002-7205	20020612
FR 2840906	B1	20040716		
WO 2003106507	A1	20031224	WO 2003-FR1741	20030611
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003250357	A1	20031231	AU 2003-250357	20030611
EP 1511774	A1	20050309	EP 2003-760007	20030611
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005534729	T	20051117	JP 2004-513337	20030611
US 20060014722	A1	20060119	US 2005-517582	20050801

PRIORITY APPLN. INFO.: FR 2002-7205 A 20020612
WO 2003-FR1741 W 20030611

OTHER SOURCE(S): MARPAT 140:52345

AB Derivs. of per(3,6-anhydro) cyclodextrins having the general formulas (I) and (II) are prepared which can be used for the separation or fixation of chromate, dichromate and/or manganate anions from water or as a pharmaceutical complexing agent for humans. R1 in the general formulas I and II represents -OCONHR2, OH, OR3, SH, SR3, OCOR3, NH2, NHR3, NR3R4, CONH2, CONR3R4, CN, COOR3, OCH2COOH, or COOH, R3 and R2 represent an aliphatic, saturated or unsatd. group, R3 and R4 represent an aliphatic or aromatic hydrocarbon group which can be saturated or unsatd. and which can be substituted by halogen atoms or hetero atoms, such as O, S, and N, and n

is 6, 7, or 8, or R1 represents the group OCONH(CR5R6)mNHCOOR7 with R5 and R6 being aliphatic saturated or unsatd. groups, and R7 represents glucosidic or maltosidic units of peranhydrocyclodextrin and m is a number from 1 to 20. Preferably, R1 of the per(3,6-anhydro) cyclodextrin derivative is -OCONHR2 with R2 being an Et or hexyl group and n being 6. The per(3,6-anhydro) cyclodextrin derivs. are prepared by reacting per(3, 6-anhydro) cyclodextrins having the general formulas (III) and (IV) with an isocyanate OCN-R2 or a diisocyanate OCN(CR5R6)mNCO. Polymers are obtained by reacting at least two per(3,6-anhydro) cyclodextrin derivs. having the general formulas III and IV with n and m being 6 and R5 and R6 being H. For the removal of anions from water the per(3,6-anhydro) cyclodextrin derivative or polymer is dissolved in an organic solvent immiscible with water.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 15 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:940046 CAPLUS <<LOGINID::20080331>>

DOCUMENT NUMBER: 141:16917

TITLE: In vitro cellular toxicity and in vitro lethality studies of alkylated α- anhydro cyclodextrins

AUTHOR(S): Debouzy, J. S.; Gadelle, A.; Pailler, J. Y.; Fusai, T.; Dabouis, V.; Pradines, B.; Fauvelle, F.; Crouzier, D.

CORPORATE SOURCE: CRSSA/SCM et Service d'Imagerie, La Tronche, 38702, Fr.

SOURCE: STP Pharma Sciences (2003), 13(3), 209-214 CODEN: STSSE5; ISSN: 1157-1489

PUBLISHER: Editions de Sante

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The overall toxicity of several per(3, 6-anhydro)-α-cyclodextrins was studied both in vivo, in mice (mortality), and in vitro, in cells (VERO and CHO strains) and erythrocytes (hemolytic activity). It was found that mortality increased with the chain length, thus ranging from 0% (35 mM, saturated solution of per(3,6-anhydro)-α-cyclodextrin, A36) to a LD50 of 45-48 mM (per(2-O-methyl), M36)), and to 30% death at 10 mM (saturated per(2-O-Et, E36). A similar dependence of hemolytic activity on the chain length was also found, with the lowest HD50 observed for E36 and a negligible hemolysis observed for A36 and M36. Furthermore, cell toxicities observed on VERO and CHO cell cultures provided quite similar results. Finally, E36 was the only derivative able to interfere with the cell adhesiveness in plasmodium infected cells. It was suggested that the tensioactive properties of E36 are related both with this activity and with the overall toxicity of these derivs. Other chemical modifications were proposed to enhance the security range between toxicity and anti-adhesive activity.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 16 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:844261 CAPLUS <<LOGINID::20080331>>

DOCUMENT NUMBER: 140:42393

TITLE: Functionalization of Cyclodextrins via Reactions of 2,3-Anhydrocyclodextrins

AUTHOR(S): Yuan, De-Qi; Tahara, Tsutomu; Chen, Wen-Hua; Okabe, Yuji; Yang, Cheng; Yagi, Youichi; Nogami, Yasuyoshi; Fukudome, Makoto; Fujita, Kahee

CORPORATE SOURCE: Department of Molecular Medicinal Sciences, Graduate School of Biomedical Sciences, Nagasaki University, Nagasaki, 852-8521, Japan

SOURCE: Journal of Organic Chemistry (2003), 68(24), 9456-9466 CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 140:42393

AB Three types of reactions of 2,3-anhydro-β-cyclodextrins, namely nucleophilic ring-opening, reduction to 2-enopyranose, and reduction to 3-deoxypyranose, have been investigated to regio- and stereoselectively functionalize the secondary face of β-

cyclodextrin. Upon treatment with various nucleophiles, both 2,3-manno-epoxy and 2,3-allo-epoxy-β- cyclodextrins are found to undergo nucleophilic ring-opening reaction generating 3- and 2-modified cyclodextrin derivs. In each case, the 3-position is more easily accessible than the 2-position. By using these ring-opening reactions, imidazolyl, iodo, azido, and benzylmercapto groups are selectively introduced to the secondary face of β- cyclodextrin in place of the 2- or 3-hydroxyl groups. The functionalized cyclodextrins have either modified glucosidic subunits or modified altrosidic subunits that make the hydrophobic cavity slightly distorted from that of native β- cyclodextrin. Thiourea also reacts with the cyclodextrin epoxides. In this case, thiirane and olefin species are generated instead of any ring-opening products. By ameliorating the reaction condition, cyclodextrin olefin, diene, and triene derivs. are prepared in moderate to good yields. Reduction of per[6-(tert-butyldimethyl)silyl]-β- cyclodextrin permannoepoxide with lithium aluminum hydride produces the per(3-deoxy)-β-cyclomannin. All these chemical modified cyclodextrins are structurally well characterized and most of them are expected to serve as versatile scaffolds for diverse purposes such as the construction of catalysts and development of synthetic receptors and mol. containers.

REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 17 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:795151 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 140:42364
TITLE: Preparation and reactivity of a novel disaccharide, glucosyl 1,5-anhydro-D-fructose (1,5-anhydro-3-O-α-glucopyranosyl-D-fructose)
AUTHOR(S): Yoshinaga, Kazuhiro; Abe, Jun-ichi; Tanimoto, Toshiko; Koizumi, Kyoko; Hizukuri, Susumu
CORPORATE SOURCE: The United Graduate School of Agricultural Sciences, Kagoshima University, Kagoshima, 890-0065, Japan
SOURCE: Carbohydrate Research (2003), 338(21), 2221-2225
CODEN: CRBRAT; ISSN: 0008-6215
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:42364
AB A novel disaccharide, glucosyl 1,5-anhydro-D-fructose (1,5-anhydro-3-O-α-glucopyranosyl-D-fructose, GAF) was enzymically prepared from 1,5-anhydro-D-fructose (1,5-AF) and cyclomaltoheptaose (β- cyclodextrin). Cyclodextrin glucanotransferase transferred various sizes of maltooligosaccharide to 1,5-AF. Glucoamylase digested the maltooligosyl chain of the products to a glucosyl residue giving a final product, GAF. An NMR anal. of GAF elucidated that the glucose residue was linked to C-3 of the 1,5-AF residue with an ether linkage. Reactivity on the aminocarbonyl reaction of GAF with bovine serum albumin was lower than that of 1,5-AF, but was higher than that of glucose.
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 18 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:243534 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 138:329325
TITLE: Per(3-deoxy)-α-cyclomannin. An n-butanol hexahydrate inclusion complex
AUTHOR(S): Lindner, Hans J.; Lichtenthaler, Frieder W.; Fujita, Kahee; Yang, Cheng; Yuan, De-Qi; Nogami, Yasuyoshi
CORPORATE SOURCE: Institut fur Organische Chemie, Darmstadt University of Technology, Darmstadt, D-64287, Germany
SOURCE: Acta Crystallographica, Section E: Structure Reports Online (2003), E59(3), o387-o389
CODEN: ACSEBH; ISSN: 1600-5368
URL: http://journals.iucr.org/e
PUBLISHER: International Union of Crystallography
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English
AB The title compound was prepared by hydride opening of the epoxide rings in

2,3-anhydro-α-cyclomannin and the inclusion complex was obtained by adding a small amount of n-BuOH to an aqueous solution thereof. The complex is monoclinic, space group P21, a 7.3995(5), b 24.4481(18), c 14.2649(8) Å, β 99.116(5)°, Z = 2, dc = 1.380, R = 0.039, Rw = 0.076 at T = 211(2) K for 3750 reflections. The host mol. has a cavity similar in diameter but smaller in torus height than that of α-cyclodextrin, due to the axial C-2-OH groups pointing away from the ring plane. The mols. have approx. C6 symmetry and pack into stacks with channels occupied by disordered n-BuOH mols. Water of crystallization fills the space between the stacks.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 19 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:878935 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 136:247766
TITLE: Two stereoisomeric 3I,2II-anhydro-α-cyclodextrins: a molecular dynamics and crystallographic study
AUTHOR(S): Immel, Stefan; Fujita, Kahee; Fukudome, Makoto; Bolte, Michael
CORPORATE SOURCE: Institut fur Organische Chemie, Technische Universitat Darmstadt, Darmstadt, D-64287, Germany
SOURCE: Carbohydrate Research (2001), 336(4), 297-308
CODEN: CRBRAT; ISSN: 0008-6215
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:247766

AB Regioselective epoxide ring opening of 2I,3I-(2IS)-anhydro-α-cyclodextrin (1) through intramol. attack of hydroxyl groups of neighboring glucose rings occurs in diequatorial fashion to yield 3I,2II-anhydro-α-cyclodextrin (3) with a rigid glucopyranose-dioxane-glucopyranose tricyclic ring system, the usual diaxial opening and the gluco/altro-configurated stereoisomer 2 cannot be detected. Mol. dynamic simulations in water were used to analyze the conformations of 1-3 and the stereochem. implications of this reaction. Due to the contracted 2,3-OH side of the torus, 3 features an inverted conicity compared to the parent α-cyclodextrin. A crystallog. study on the bis-3·3 n-PrOH nonahydrate not only displays little variations between the solid-state and solution geometries of 3, but also provides a mol. picture of a unique inclusion complex in which three n-propanol mols. are distributed in the cavity of a dimeric unit of 3 (monoclinic, space group P21, a=14.257(1), b=22.623(2), c=16.644(1) Å, β=104.82(1)°, all 19278 reflections with I>2σ(I) yield R(F)=0.1017).

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 20 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:730839 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 135:290396
TITLE: Per(3,6-anhydro)cyclodextrin derivatives, preparation and use thereof for separating ions
INVENTOR(S): Gadelle, Andree; Fauvelle, Florence; Debouzy, Jean-Claude
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.; Centre National de la Recherche Scientifique (CNRS)
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001072849	A1	20011004	WO 2001-FR923	20010327
W: US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				

FR 2807044	A1	20011005	FR 2000-3899		20000328
FR 2807044	B1	20020503			
EP 1187854	A1	20020320	EP 2001-919576		20010327
EP 1187854	B1	20041110			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
AT 282048	T	20041115	AT 2001-919576		20010327
ES 2231469	T3	20050516	ES 2001-919576		20010327
US 20020137923	A1	20020926	US 2001-926637		20011128
US 6599739	B2	20030506			
PRIORITY APPLN. INFO.:			FR 2000-3899	A	20000328
			WO 2001-FR923	W	20010327

OTHER SOURCE(S): MARPAT 135:290396

AB The invention concerns per(3,6-anhydro)cyclodextrin derivs., their preparation and their use for separating polluting ions, for example, for human decontamination. The derivs. bear axially or equatorially substituted group R1 on positions 2 where one R1 at least represents the -OCH2COOH group and the other R1's, identical or different, correspond to one of the formulas: OH, OR2, SH, SR2, OCOR2, NH2, NHR2, NR2R3, CONH2, CONHR2, CONR2R3, CN, COOR2, COOH and R2, wherein: R2 and R3, identical or different, represent a saturated or unsatd. hydrocarbon, aliphatic or aromatic group, capable of comprising one several heteroatoms selected among O, S and N; and n is equal to 6, 7 or 8. Thus, heating 1 g hexakis(3,6-anhydro)cyclomaltohexaose for 2 h at 120°, adding 10 mL DMSO and 10 mL a 2N NaH DMSO solution, mixing under Ar for 3 h at room temperature, combining the resulting blue-gray solution with 1.6 g Na monochloroacetate, mixing at room temperature for 24 h and working up gave a hexakis(3,6-anhydro-2-O-carboxymethyl)cyclomaltohexaose which formed easily complexes with aqueous solution containing Lu3+, La3+, Dy3+, Eu3+ and Co2+ ions.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 21 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:505541 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 135:153031
TITLE: Flexible non-glucose cyclo-oligosaccharides
AUTHOR(S): Immel, S.
CORPORATE SOURCE: Institute of Organic Chemistry, Darmstadt University of Technology, Darmstadt, D-64287, Germany
SOURCE: Cyclodextrin: From Basic Research to Market, International Cyclodextrin Symposium, 10th, Ann Arbor, MI, United States, May 21-24, 2000 (2000), 274-281. Wacker Biochem Corp.: Adrian, Mich.
CODEN: 69BEYD
DOCUMENT TYPE: Conference; (computer optical disk)
LANGUAGE: English

AB A symposium. Despite lack of torus stabilization through inter-residue hydrogen bonds, per-2,3-anhydro α-cyclomannin adopts almost C6 sym. conformations in the solid-state structures of its ethanol and 1-propanol inclusion complexes. Thoroughly flexible cyclo-oligosaccharides are obtained from incorporation of α-D-altropyranose residues into the macro-ring; mono-altro β-cyclodextrin displays an "induced-fit" type complexation of adamantane 1-carboxylate, and α-cycloaltrin (α-CA) is characterized by an alternating sequence 4C1 / 1C4 altrose geometries. Anal. of the conformational properties of α-CA reveals a mechanism of global pseudo-rotational motions in the macrocycle. Similar effects are observed in highly substituted cyclodextrin derivs., as well as in cyclofructins, and CD-derived large ring crown acetals.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 22 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:514806 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 133:237443
TITLE: Structure and lipophilicity profile of 2,3-anhydro-α-cyclomannin and its ethanol inclusion complex
AUTHOR(S): Immel, Stefan; Fujita, Kahee; Lindner, Hans J.; Nogami, Yasuyoshi; Lichtenthaler, Frieder W.
CORPORATE SOURCE: Institut fur Organische Chemie, Technische Universitat Darmstadt, Darmstadt, 64287, Germany

SOURCE: Chemistry--A European Journal (2000), 6(13), 2327-2333
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Readily available from α- cyclodextrin in 3 steps, 2,3-anhydro-α-cyclomannin composed of 6 α-(1 → 4)-linked 2,3-anhydro-D-mannopyranose residues, crystallizes well when precipitated from aqueous EtOH. An x-ray structure reveals the macrocycle to contain EtOH in its cavity, thus representing the 1st inclusion complex of a nonglucose cyclooligosaccharide. The wider rim of the torus-shaped macrocycle holds the 6 epoxide rings whose oxygens point away from the cavity, thereby sculpturing the unique over-all shape of a 6-pointed star.
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 23 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:311144 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 132:339914
TITLE: Cation complexation properties of hexakis(2-O-methyl-3,6-anhydro)-α-cyclodextrin: A 1H NMR study
AUTHOR(S): Fauvelle, F.; Gadelle, A.; Debouzy, J. C.; Baudin, C.; Perly, B.
CORPORATE SOURCE: CRSSA, laboratoire de Biophysique, La Tronche, 38702, Fr.
SOURCE: Supramolecular Chemistry (2000), 11(3), 233-237
CODEN: SCHEER; ISSN: 1061-0278
PUBLISHER: Gordon & Breach Science Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The affinity of hexakis(2-O-methyl-3,6-anhydro)-α-cyclodextrin (3,6-α-CDM) for Ba2+, Pb2+, Ca2+ and Sr2+ has been tested by 1H NMR. 3,6-α-CDM forms strong complexes in water with Pb2+ and Ba2+. The comparison with the parent hexakis(3,6-anhydro)-α-cyclodextrin bearing hydroxyl groups instead of methoxy groups reveals that the O-CH3 substitution significantly improves the anhydro-cyclodextrin selectivity.
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 24 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:56571 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 132:345099
TITLE: New asymmetric β- cyclodextrin derivatives designed for chiral recognition
AUTHOR(S): Djedaini-Pilard, F.; Gosnat, M.; Brucato-Mauclaire, V.; Creminon, C.; Dalbiez, J. P.; Pilard, S.; Luijten, W.; Perly, B.
CORPORATE SOURCE: DRECAM/SCM, DRM/SPI, CEA-Saclay, Gif sur Yvette, F-91191, Fr.
SOURCE: Proceedings of the International Symposium on Cyclodextrins, 9th, Santiago de Comostela, Spain, May 31-June 3, 1998 (1999), Meeting Date 1998, 625-628.
Editor(s): Labandeira, J. J. Torres; Vila-Jato, J. L.
Kluwer Academic Publishers: Dordrecht, Neth.
CODEN: 68NHAE
DOCUMENT TYPE: Conference
LANGUAGE: English
AB In the continuing challenge of increasing the performances of cyclodextrins (CD5) for various applications, it has been observed that very simple chemical modifications of the CD core lead to very large improvements. A clear illustration is provided by mono-3,6-anhydro-βCD (1) , mono-3,6- anhydro-heptakis-2-O-methyl-hexakis-6-O-methyl-β3CD (2), and mono-3,6-anhydro-heptakis-2,3-O-methyl-hexakis-6-O-methyl-βCD (3). These compds. are prepared and purified by HPLC. A structural anal. of (1) alone and with different chiral mols. has been already performed. A complete characterization of (2) and (3) has been achieved by high resolution NMR and mass spectrometry with electrospray infusion mode and have shown a complete reduction of symmetry. These three compds. exhibit inclusion properties similar to the parent CD as observed by NMR for a variety of hosts. However, the lack of symmetry induces a very large chiral separation of

racemic compds. Moreover they display a strongly increased solubility and solubilization power even at high temperature The hemolytic character of these three compds. has been also investigated and compared to homogeneous series of pure β-CD derivs. Finally, it was shown as expected that antibodies raised against β-CD, di-2,6-O-methyl-β-CD (DIMEB) and tri-2,3,6-O-methyl-β-CD (TRIMEB), resp., failed to recognize any asym. analog.
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 25 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:752 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 132:176750
TITLE: NMR study of per(3,6-anhydro)-α-cyclodextrin as a potential agent for the biological decontamination of lead
AUTHOR(S): Debouzy, J. C.; Fauvelle, F.; Girault, L.
CORPORATE SOURCE: U. Biophysique, CRSSA, La Tronche, 38702, Fr.
SOURCE: Bollettino Chimico Farmaceutico (1997), 136(9), 605-609
CODEN: BCFAAI; ISSN: 0006-6648
PUBLISHER: Societa Editoriale Farmaceutica
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The ability of per(3,6-anhydro)-α- cyclodextrin (3,6CD) to capture lead from a preformed glutation (GSH)-lead complex was investigated by NMR spectroscopy. Such a removal strongly depends on the nature and pH of the buffer used in the competition expts. It was found that an almost complete removal of lead can be achieved at pH 5.5, especially when lead nitrate is used. The capture also strongly depends on the nature of the lead species as well as of the counter ion present in the medium. These observations imply that decontamination of lead by this process should be optimal under acidic conditions, i.e. in the acidic tractus (stomach). Conversely, lead decontamination at neutral pH was of poor efficiency or required a large excess of (3,6CD). This was particularly the case when human plasma was used as solvent.
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 26 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:719468 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 132:122828
TITLE: Synthesis of the first per(3-deoxy)cyclo-oligosaccharide: hepta(manno-3-deoxy-6-O-t-butyldimethylsilyl)-β- cyclodextrin
AUTHOR(S): Kelly, David R.; Mish'al, Adel K.
CORPORATE SOURCE: Department of Chemistry, Cardiff University, Cardiff, CF1 3TB, UK
SOURCE: Tetrahedron: Asymmetry (1999), 10(18), 3627-3648
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Reduction of hepta(manno-2,3-anhydro-6-O-t-butyldimethylsilyl)-β- cyclodextrin with lithium triethylborohydride gives hepta(manno-3-deoxy-6-O-t-butyldimethylsilyl)-β- cyclodextrin . This compound plus the hepta(2-O-methyl)- and hepta(2-O-benzyl)-derivs. all have the 4C1 conformation. Capillary GC columns manufactured with hepta(manno-2,3-anhydro)-, hepta(manno-3-deoxy-2-O-methyl)- and hepta(manno-2-O-benzyl-6-O-t-butyldimethylsilyl)-β-cyclodextrin stationary phases were evaluated for enantio-discrimination with 39 non-polar racemic analytes. The GC column coated with the benzyl derivative showed enantioselectivity comparable to, and in some cases superior to, a com. per(methyl)-β- cyclodextrin column. The other columns showed little or no enantio-discrimination. A thermodn. study established a linear enthalpy-entropy compensation effect for two series of analytes on the com. permethyl-β-cyclodextrin column, but not for the column coated with the benzyl derivative
REFERENCE COUNT: 80 THERE ARE 80 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 27 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:694985 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 132:152044
TITLE: Polysulfonylated cyclodextrins. Part 11. Preparation and structural validation of three isomeric pentakis(6-O-mesitylsulfonyl)cycloma ltoheptaoses
AUTHOR(S): Yamamura, Hatsuo; Iida, Daisuke; Araki, Shuki; Kobayashi, Kyoko; Katakai, Ryoichi; Kano, Kazuaki; Kawai, Masao
CORPORATE SOURCE: Showa-ku, Gokiso-cho, Department of Applied Chemistry, Nagoya Institute of Technology, Nagoya, 466-8555, Japan
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1999), (21), 3111-3115
CODEN: JCPRB4; ISSN: 0300-922X
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:152044
AB Three isomers of cycloma ltoheptaose derivs., 1a-c, which possess five mesitylenesulfonyloxy groups on their O-6 atoms, were prepared Assignment of the regioisomers was performed by their conversion into compds. containing five 3,6-anhydroglucose units followed by 1H NMR analyses. The structures of the pentakis(3,6-anhydro) derivs. were also confirmed by their derivation from the known bis(TBDMS) derivs.
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 28 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:74793 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 130:182679
TITLE: Application of a selective HSQC experiment to measure interglycosidic heteronuclear long-range coupling constants in cyclodextrins
AUTHOR(S): Forgo, Peter; D'Souza, Valerian T.
CORPORATE SOURCE: Dep. Chemistry, University Missouri-St Louis, St Louis, MO, 63121, USA
SOURCE: Magnetic Resonance in Chemistry (1999), 37(1), 48-52
CODEN: MRCHEG; ISSN: 0749-1581
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A selective one-dimensional HSQC experiment was used to obtain heteronuclear long-range coupling consts. for native and chemical modified cyclodextrins (3,6-anhydro-β- cyclodextrin) and a non-covalent complex of α- cyclodextrin with p-nitrophenol. Selective excitation was performed on C-4 in the α-glucose units using DANTE hard pulse trains. The measured heteronuclear long-range coupling consts. have similar values for all natural cyclodextrins. The high value of these coupling consts. indicates that the low dihedral angle between H-1 and C-4 found in the solid state is retained in solution Chemical modification or complex formation, however, decreases the coupling constant by increasing the dihedral angle between these nuclei.
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 29 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:8034 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 130:71569
TITLE: Method for fixing or separating ions such as lead by using per(3,6-anhydro)cyclodextrin derivatives
INVENTOR(S): Baudin, Cecile; Perly, Bruno; Gadelle, Andree; Debouzy, Jean-Claude; Fauvelle, Florence
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9856829	A1	19981217	WO 1998-FR1235		19980612
W: AU, HU, JP, RU, US					
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
FR 2764525	A1	19981218	FR 1997-7339		19970613
FR 2764525	B1	19990723			
ZA 9805079	A	19990112	ZA 1998-5079		19980611
AU 9882181	A	19981230	AU 1998-82181		19980612
AU 752287	B2	20020912			
EP 991670	A1	20000412	EP 1998-932194		19980612
EP 991670	B1	20011031			
R: CH, DE, GB, IT, LI, NL, SE					
HU 2000002298	A2	20001128	HU 2000-2298		19980612
HU 2000002298	A3	20030528			
JP 2002504167	T	20020205	JP 1999-501800		19980612
US 6544964	B1	20030408	US 2000-445818		20000324
PRIORITY APPLN. INFO.:			FR 1997-7339	A	19970613
			WO 1998-FR1235	W	19980612

OTHER SOURCE(S): MARPAT 130:71569

AB A method for fixing or separating ions, in particular of lead by using per(3,6-anhydro)cyclodextrin derivs. consists in contacting the medium containing the ions to be fixed or separated, with the derivative Preferably, for fixing lead hexakis(3,6-anhydro-2-O-methyl)cyclomaltohexaose (I) is used. The complexation will eliminate the environmental lead pollution. Thus, I was prepared by the methylation of hexakis(3,6-anhydro)cyclomaltohexose with MeI in the presence of NaH in DMF solution I was then treated with Pb(NO3)2 to give the complex which was characterized by spectral methods. I is useful for the decontamination of lead.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 30 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:439306 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 129:230901
TITLE: Regioselective acylations at C-2 in β-cyclodextrin derivatives. Use of N-Tosylimidazole for the synthesis of epoxide derivatives of β- cyclodextrin
AUTHOR(S): Isac-Garcia, J.; Lopez-Paz, M.; Santoyo-Gonzalez, F.
CORPORATE SOURCE: Inst. Biotecnologia, Fac. Ciencias, Univ. Granada, Granada, E-18071, Spain
SOURCE: Carbohydrate Letters (1998), 3(2), 109-116
CODEN: CLETEC; ISSN: 1073-5070
PUBLISHER: Harwood Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Regioselective benzoylation and mesylation of the β-cyclodextrin derivs. (I; R = SPh, R1 = H, SO2Me, or Bz; R = OSiMe2CMe3, R1 = H or Bz) were performed using 1-O-benzoyloxy- or 1-O-methanesulfonyloxy-1H-benzotriazole, resp. N-Tosylimidazole is a good reagent for the synthesis of manno-epoxides, i.e. heptakis(2,3-anhydro-α-D-manno)cycloheptaoses (II; R = SPh, OSiMe2CMe3, OH) derived from cyclodextrin derivs. I (R = SPh, OSiMe2CMe3; R1 = H). Thus, treatment of heptakis(6-deoxy-6-phenylthio)cyclomaltoheptaose I (R = SPh, R1 = H) and heptakis(6-O-tert-butyldimethylsilyl)cyclomaltohep taose I (R = OSiMe2CMe3, R1 = H) and NaH in DMF at room temperature gave heptakis(2,3-anhydro-α-D-manno)cycloheptaoses II (R = SPh, R1 = H) and II (R = OSiMe2CMe3, R1 = H) in 100 and 62% yield, resp. Alternatively, selective methanesulfonylation of I (R = SPh, R1 = H) with 1-methanesulfonyloxy-1H-benzotriazole gave the 2-mesylate I (R = SPh, R1 = SO2Me) in 67% yield which was treated with NaOMe in MeOH to give the epoxide II (R = SPh) in 73% yield. Benzoylation of I (R = SPh, R1 = H) by 1-benzoyloxy-1H-benzotriazole allowed the formation of I (R = SPh, R1 = Bz) in 50% yield.

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 31 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:150269 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 128:192850
TITLE: Electrochemically-Promoted Reductive Cleavage of Glycosides
AUTHOR(S): Zheng, Jibin; Gore, John L.; Gray, Gary R.
CORPORATE SOURCE: Department of Chemistry, University of Minnesota, Minneapolis, MN, 55455, USA
SOURCE: Journal of the American Chemical Society (1998), 120(11), 2684-2685
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Reductive cleavage of permethylated glycosides has been achieved using an electro-generated acid (EGA). pre-electrolysis. The cleavage reaction was carried out by electrolysis of the permethylated glycoside in CH2Cl2 containing an electrolyte and reducing agent, BH3·SMe2, at 10 V with 2 h pre-electrolysis. The cleavage reactivity depends upon the acidity of EGA, which can be varied by selection of the appropriate electrolyte. The reactivity is dependent on the nature of both cation and anion of the electrolytes. In CH2Cl2, the order of cleavage reactivity of cations is Fe(II) > Zn(II) > Mn(II) > Ni(II) > Co(II) > Li(I) whereas, the order of cleavage reactivity of anions is ClO4- > CF3SO3- > BF4-.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 32 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:553822 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 127:190980
TITLE: Substituted derivatives of per(3,6-anhydro) cyclodextrins, process for their preparation and their uses for TLC separation of cations
INVENTOR(S): Baudin, Cecile; Perly, Bruno; Gadelle, Andree
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 787744	A1	19970806	EP 1997-400197	19970128
EP 787744	B1	20010613		
R: CH, DE, GB, IT, LI, NL, SE				
FR 2744124	A1	19970801	FR 1996-1073	19960130
FR 2744124	B1	19980306		
US 5792857	A	19980811	US 1996-773001	19961223
AU 9712303	A	19970807	AU 1997-12303	19970123
AU 707604	B2	19990715		
ZA 9700689	A	19970730	ZA 1997-689	19970128
JP 09208603	A	19970812	JP 1997-15751	19970129
JP 4063909	B2	20080319		
HU 9700280	A2	19971229	HU 1997-280	19970129
HU 9700280	A3	20010129		
HU 222055	B1	20030428		
PRIORITY APPLN. INFO.:			FR 1996-1073 A	19960130

OTHER SOURCE(S): MARPAT 127:190980
AB Per(3,6-anhydro)-(α-, β-, and γ)-cyclodextrins, substituted at the 2' position with R (R = OH, OR1, SR1, OCOR1NH2, amine, amide, CONH2, CO2R1, OSO2R1, N3; R1 = H, alkyl, aryl, heterocycle) were prepared and used for TLC separation of cations. Thus, hexakis(3,6-anhydro-2-O-acetyl)cyclomaltohexaose was prepared and used for separation of cations, such as K+ and Cs+, by TLC .

L17 ANSWER 33 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:261384 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 127:17884
TITLE: Enantiomer separation of permethylated monosaccharides and 1,5-anhydro alditols and simultaneous

determination of linkage positions and absolute configuration in the galactan of Helix pomatia
AUTHOR(S): Heinrich, Juergen; Koenig, Wilfried A.; Bretting, Hagen; Mischnick, Petra
CORPORATE SOURCE: Institut fur Organische Chemie, Universitat Hamburg, Hamburg, D-20146, Germany
SOURCE: Carbohydrate Research (1997), 299(1-2), 1-6 CODEN: CRBRAT; ISSN: 0008-6215
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The enantiomers of permethylated monosaccharides and 1,5-anhydro alditols were resolved using modified cyclomaltoheptaoses and cyclomaltooctaoses (β- and γ- cyclodextrins) as chiral stationary phases in capillary GLC. This method was applied to the galactan from Helix pomatia, which contains both D- and L-galactose. The corresponding 1,5-anhydro galactitols which were formed by reductive cleavage of the permethylated galactan could be separated, allowing the simultaneous determination of linkage position and absolute configuration of galactose residues in snail galactan.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 34 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:139243 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 126:232634
TITLE: Letter: electrospray ionization and matrix-assisted laser desorption/ionization mass spectrometric studies of cation complexation with per-3,6-anhydro -α- cyclodextrin
AUTHOR(S): Jaquinod, Michel; Petillot, Yves; Forest, Eric
CORPORATE SOURCE: Inst. Biol. Structurale, CEA-CNRS, Grenoble, 38027, Fr.
SOURCE: European Mass Spectrometry (1996), 2(6), 381-384 CODEN: EMSPFW; ISSN: 1356-1049
PUBLISHER: IM Publications
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Per-3,6-anhydro-α- cyclodextrin (3,6-α-CD) was shown to form adducts with the cations Pb2+, Sr2+ and K+ by electrospray ionization (ESI) and matrix-assisted laser desorption/ionization (MALDI) mass spectrometric studies. The relative affinities of the cations were studied. The results confirmed the ability of ESI-MS to detect intact non-covalent assocns. such as 3,6-α-CD with cations. MALDI-MS results showed that this technique can be used to study inclusion complexes.

L17 ANSWER 35 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:748031 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 126:83830
TITLE: Rapid method for the determination of the substitution pattern of O-methylated 1,4-glucans by high-pH anion-exchange chromatography with pulsed amperometric detection
AUTHOR(S): Heinrich, Juergen; Mischnick, Petra
CORPORATE SOURCE: Inst. of Organic Chemistry, Univ. of Hamburg, Hamburg, D-20146, Germany
SOURCE: Journal of Chromatography, A (1996), 749(1+2), 41-45 CODEN: JCRAEY; ISSN: 0021-9673
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A rapid method was developed for the determination of the substitution pattern of Me-starches, -amyloses, -celluloses and -cyclodextrins in the anhydro glucose unit. All eight constituents possible for this type of copolymers could be separated by high-pH anion-exchange chromatog. with pulsed amperometric detection (PAD). Peaks were assigned by comparison with synthesized standard compds. For quant. evaluation the relative response factors of the O-methyl-glucose derivs. were determined

L17 ANSWER 36 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:554353 CAPLUS <<LOGINID::20080331>>

DOCUMENT NUMBER: 125:329164
TITLE: A cyclodextrin derivative with cation carrying ability: heptakis(3,6-anhydro)-β-cyclodextrin 2-O-p-phenylazobenzoate
AUTHOR(S): Yamamura, Hatsuo; Kawai, Hirotake; Yotsuya, Tadahiro; Higuchi, Tamotsu; Butsugan, Yasuo; Araki, Shuki; Kawai, Masao; Fujita, Kahee
CORPORATE SOURCE: Dep. of Applied Chem., Nagoya Inst. of Technology, Nagoya, 466, Japan
SOURCE: Chemistry Letters (1996), (9), 799-800
CODEN: CMLTAG; ISSN: 0366-7022
PUBLISHER: Nippon Kagakkai
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A cation-complexing host, heptakis(3,6-anhydro)-B-cyclodextrin, was converted to a mono-p-phenylazobenzoyl derivative, which exhibited alkali metal-carrying ability in CH2Cl2-H2O system.

L17 ANSWER 37 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:386030 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 125:56375
TITLE: Algal α-1,4-glucan lyase gene sequence, and enzyme use in 1,5-anhydrofructose preparation from α-1,4-glucan or starch
INVENTOR(S): Yu, Shukun; Bojsen, Kirsten; Marcussen, Jan
PATENT ASSIGNEE(S): Danisco A/s, Den.
SOURCE: PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9612026	A1	19960425	WO 1995-EP2172	19950606
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
WO 9510616	A2	19950420	WO 1994-EP3397	19941015
WO 9510616	A3	19950727		
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9527384	A	19960506	AU 1995-27384	19950606
AU 693903	B2	19980709		
EP 786008	A1	19970730	EP 1995-922520	19950606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
GB 2294048	A	19960417	GB 1995-21167	19951016
GB 2294048	B	19970423		
US 6541237	B1	20030401	US 1999-275608	19990324

PRIORITY APPLN. INFO.:

WO 1994-EP3397	A	19941015
GB 1994-22157	A	19941103
GB 1995-7523	A	19950411
GB 1993-21301	A	19931015
GB 1993-21302	A	19931015
GB 1993-21303	A	19931015
GB 1993-21304	A	19931015
GB 1993-21305	A	19931015
WO 1995-EP2172	W	19950606
US 1997-836156	B1	19970415

AB An enzyme isolatable from algae is described. Also, a method of preparing the sugar 1,5-D-anhydrofructose is described. The method comprises treating an α-1,4-glucan with an α-1,4-glucan lyase wherein

the enzyme is used in substantially pure form. In a preferred embodiment, if the glucan contains links other than and in addition to the α-1,4-links, the α-1,4-glucan lyase is used in conjunction with a suitable reagent that can break the other links.

L17 ANSWER 38 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:311934 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 125:58897
TITLE: X-ray crystallographic study of octakis(3,6-anhydro)-γ- cyclodextrin with a highly specific cation binding ability
AUTHOR(S): Yamamura, Hatsuo; Masuda, Hideki; Kawase, Yoshitaka; Kawai, Masao; Butsugan, Yasuo; Einaga, Hisahiko
CORPORATE SOURCE: Dep. Applied Chemistry, Nagoya Inst. Technol., Nagoya, 466, Japan
SOURCE: Chemical Communications (Cambridge) (1996), (9), 1069-1070
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Octakis(3,6-anhydro)-γ- cyclodextrin, which is composed of eight 3,6-anhydroglucoses, is analyzed by x-ray crystalloq. to determine its unique structure which contains a hydrophilic cavity enabling specific binding to Cs+.

L17 ANSWER 39 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:164528 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 124:343846
TITLE: Dependence of guest-binding ability on cavity shape of deformed cyclodextrins
AUTHOR(S): Fujita, Kahee; Okabe, Yuji; Ohta, Kazuko; Yamamura, Hatsuo; Tahara, Tsutomu; Nogami, Yasuyoshi; Koga, Toshitaka; Yamamura, Hatsuo
CORPORATE SOURCE: Fac. Pharmaceutical Sciences, Nagasaki Univ., Nagasaki, 852, Japan
SOURCE: Tetrahedron Letters (1996), 37(11), 1825-8
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Guest-binding ability of some β- cyclodextrin derivs. with deformed cavities were dependent on the cavity shapes, where 2,3'-anhydro-β- cyclodextrin bound methyl orange about 2.8 times stronger than native β- cyclodextrin at 10°C.

L17 ANSWER 40 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:886770 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 123:290241
TITLE: Analysis of cationic starches: determination of the substitution pattern of O-(2-hydroxy-3-trimethylammonium)propyl ethers
AUTHOR(S): Wilke, Olaf; Mischnick, Petra
CORPORATE SOURCE: University Hamburg, Institute Organic Chemistry, Hamburg, D-20146, Germany
SOURCE: Carbohydrate Research (1995), 275(2), 309-18
CODEN: CRBRAT; ISSN: 0008-6215
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A method was developed to determine the substitution pattern of O-(2-hydroxy-3-trimethylammonium)propyl ethers of starch. As model compds., cationic cyclomaltoheptaose and cyclomaltooctaose were prepared After cleavage of the glucosidic linkages by methanolysis and subsequent permethylation, the pos. charged substituents were transformed to the neutral O-(2-methoxy)-2-propenyl ethers. These compds. could directly be separated by capillary GLC or after mild hydrolysis as the more stable O-(2-oxo)propyl derivs. To halve the number of degradation products, the Me glucosides were reduced to the corresponding 1,5-anhydro -glucitols. Results for 2 model compds. [degree of substitution (ds) 0.33 and 0.46] and 3 cationic starches (ds 0.02-0.05) are given.

L17 ANSWER 41 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:806970 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 124:30161
TITLE: Selective Functionalization and Flexible Coupling of Cyclodextrins at the Secondary Hydroxyl Face
AUTHOR(S): van Dienst, Erik; Snellink, Bianca H. M.; von Piekartz, Irma; Sansey, Marcel H. B. Grote; Venema, Fokke; Pelters, Martinus C.; Nolte, Roeland J. M.; Engbersen, Johan F. J.; Reinhoudt, David N.
CORPORATE SOURCE: Laboratory of Organic Chemistry, University of Twente, Enschede, 7500 AE, Neth.
SOURCE: Journal of Organic Chemistry (1995), 60(20), 6537-45
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Methods are described for the chemo- and regioselective monofunctionalization of the secondary hydroxyl face of cyclodextrins. Monofunctionalization takes place either by nucleophilic epoxide opening of mono(2A,3A-anhydro)heptakis(6-O-tert-butyldimethylsilyl)-(2AS)-β-cyclodextrin by ethylenediamine, lithium azide, or ammonia or by direct monoalkylation of one of the C(2)-hydroxyl groups of heptakis(6-O-tert-butyldimethylsilyl)cyclodextrins with primary alkyl bromides, with cyano-, ethynyl-, or ester-containing functional groups. The latter route enables the synthesis of mono(2A-O-(α-(4-(aminomethyl)tolyl))hexakis(2B,2C,2D,2E,2F,2G-O-methyl)heptakis(6-O-tert-butyldimethylsilyl)-β-cyclodextrin and its 2-aminomethyl isomer. These are lipophilic precursors for cyclodextrin derivs. having one reactive functional group and an enlarged mol. cavity formed by partial methylation of the secondary hydroxyl face. The direct monoalkylation route of the secondary face leaves the structure of the cavity intact, while this is distorted in the route using nucleophilic epoxide opening. Two amino-functionalized cyclodextrins were used for coupling reactions with a monofunctionalized calix[4]arene. In this way water-soluble cyclodextrin derivs. could be obtained of which the secondary faces were flexibly capped with a calix[4]arene moiety.

L17 ANSWER 42 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:762683 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 124:30155
TITLE: β-Cycloaltrin: a cyclooligosaccharide consisting of seven α-(1→6)-linked altropyranoses
AUTHOR(S): Fujita, Kahee; Shimada, Hideaki; Ohta, Kazuko; Nogami, Yasuyoshi; Nasu, Kyoko; Koga, Toshitaka
CORPORATE SOURCE: Fac. Pharmaceutical Sci., Nagasaki Univ., Nagasaki, 852, Japan
SOURCE: Angewandte Chemie, International Edition in English (1995), 34(15), 1621-2
CODEN: ACIEAY; ISSN: 0570-0833
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An aqueous solution of per-2,3-anhydro-(2S)-β-cyclodextrin was refluxed for 5 days to give 72.9% β-cycloaltrin. β-Cycloaltrin is a mixture of at least two rapidly interconverting conformations, 1C4 and 4C1 chair conformations.

L17 ANSWER 43 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:652296 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 123:35666
TITLE: Manufacture of branched cyclodextrins
INVENTOR(S): Hirsenkorn, Rolf; Mahl, Petra; Scheiding, Silke
PATENT ASSIGNEE(S): Consortium fuer Elektrochemische Industrie GmbH, Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4325057	A1	19950202	DE 1993-4325057	19930726
DE 4325057	C2	19961017		
US 5480985	A	19960102	US 1994-272144	19940708
JP 07062002	A	19950307	JP 1994-174252	19940726
JP 2558074	B2	19961127		

PRIORITY APPLN. INFO.: DE 1993-4325057 A 19930726

AB Branched cyclodextrins are manufactured by reacting a cyclodextrin or its derivative with a glycosyl donor at a mol ratio of 1:1-20 in the presence of a catalyst in a solvent. Thus, β-cyclodextrin (I) was mixed with glucose in the presence of Amberlyst (catalyst) in DMF solvent. The reaction mixture was filtered, and the DMF was distilled. The product was dissolved in water, and the solution was added dropwise with stirring into acetone. After 8-h reaction time, the precipitate comprised residual I 4.0, reducing sugar 13.4, and D-α-glucopyranosyl-β- cyclodextrin 82.6%.

L17 ANSWER 44 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:591774 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 123:199249
TITLE: A Novel Approach to the Synthesis of Some Chemically-Modified Cyclodextrins
AUTHOR(S): Ashton, Peter R.; Boyd, Sue E.; Gattuso, Giuseppe; Hartwell, Edward Y.; Koeniger, Rainer; Spencer, Neil; Stoddart, J. Fraser
CORPORATE SOURCE: School of Chemistry, University of Birmingham, Edgbaston/ Birmingham, B15 2TT, UK
SOURCE: Journal of Organic Chemistry (1995), 60(12), 3898-903
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 123:199249

AB A novel approach to the synthesis of some chemical-modified α-, β-, and γ- cyclodextrins (CDs) is described. The syntheses of per-(3,6-di-O-methyl)-CDs and per-(2-O-methyl=3,6-anhydro)-β-CD are reported. These compds., along with a number of other chemical-modified CD derivs., have been prepared by following a new synthetic strategy which involves the use of per-(2,6-di-O-t-butyldimethylsilyl)-CDs (I) as key intermediates. Under strong basic conditions, alkylation-namely, benzylation and methylation-of I was found to occur with the migration of the t-butyldimethylsilyl groups from the O-2 to the O-3 positions on all the D-glucopyranose residues, affording per-(2-O-benzyl-3,6-di-O-t-butyldimethylsilyl)-CDs and heptakis(2-O-methyl-3,6-di-O-t-butyldimethylsilyl)-β-CD in high yields and with high selectivities.

L17 ANSWER 45 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:382033 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 122:265827
TITLE: Synthesis and alkali metal ion binding of poly(3,6-anhydro)-α- cyclodextrins
AUTHOR(S): Yamamura, Hatsuo; Nagaoka, Hideki; Kawai, Masao; Butsugan, Yasuo; Fujita, Kahee
CORPORATE SOURCE: Dep. Appl. Chem., Nagoya Inst. Technol., Nagoya, 466, Japan
SOURCE: Tetrahedron Letters (1995), 36(7), 1093-4
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Pentakis(3,6-anhydro)-α- cyclodextrin and three regioisomers of tetrakis(3,6-anhydro)-α-cyclodextrin were synthesized from the corresponding 6-O-sulfonates to investigate the relationship among the mol. geometry, hydrophobicity-hydrophilicity balance, and inclusion behavior of CD. Each of the CD derivs. exhibited characteristic cation binding ability reflecting the unique mol. structure.

L17 ANSWER 46 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:184685 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 120:184685
TITLE: Oligonucleotides having conjugates attached at the 2'-position of the sugar moiety
INVENTOR(S): Cook, Alan Frederick; Rao, Kambhampati Venkata Babaji
PATENT ASSIGNEE(S): Pharmagenics, Inc., USA
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9323570	A1	19931125	WO 1993-US4144	19930428
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRIORITY APPLN. INFO.:			US 1992-881255 A	19920511

AB An oligonucleotide wherein at least one nucleotide unit thereof is substituted at the 2' position with a moiety -(L)n-R1, wherein L is a linker group, and n is 0 or 1; R1 is a moiety which improves uptake of the oligonucleotide into the cell and/or increases the stability of the oligonucleotide. The oligonucleotides may be employed for binding to an RNA, a DNA, a protein, or a peptide to inhibit or prevent gene transcription or gene expression, to inhibit or stimulate the activities of target mols., or the oligonucleotides may be employed as diagnostic probes for determining the presence of specific DNA or RNA sequences or proteins. Thus, glucose-attached modified oligonucleotide AGTGTTCAGTTCCGU was prepared through multiple steps by using S-Et trifluorothioacetate and 2,2'-anhydro-1-(β-D-arabinofuranosyl)uracilas starting material.

L17 ANSWER 47 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:539621 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 119:139621
TITLE: Preparation of octakis(3,6-anhydro)-γ-cyclodextrin and characterization of its cation binding ability
AUTHOR(S): Yamamura, Hatsuo; Ezuka, Toshishige; Kawase, Yoshitaka; Kawai, Masao; Butsugan, Yasuo; Fujita, Kahee
CORPORATE SOURCE: Dep. Appl. Chem., Nagoya Inst. Technol., Nagoya, 466, Japan
SOURCE: Journal of the Chemical Society, Chemical Communications (1993), (7), 636-7
CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Octakis(3,6-anhydro)-γ- cyclodextrin (I) has been prepared by the reaction of octakis(6-O-tosyl)-γ- cyclodextrin with KOH. Compound I shows a specific binding ability to alkali metal ions with larger ionic diams., owing to its hydrophilic cavity which is similar to the layered crown ethers.

L17 ANSWER 48 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:517642 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 119:117642
TITLE: Determination of the structures of tris(6-O-mesitylenesulfonyl)-α-cyclodextrin regioisomers by proton NMR analyses of the corresponding 3,6-anhydrocyclodextrin derivatives
AUTHOR(S): Yamamura, Hatsuo; Nagaoka, Hideki; Saito, Kazuki; Kawai, Masao; Butsugan, Yasuo; Nakajima, Terumi; Fujita, Kahee
CORPORATE SOURCE: Dep. Appl. Chem., Nagoya Inst. Technol., Nagoya, 466, Japan
SOURCE: Journal of Organic Chemistry (1993), 58(11), 2936-7
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal

LANGUAGE: English
AB Tris(6-O-mesitylenesulfonyl)-α- cyclodextrins were converted to tris(3,6-anhydro)-α- cyclodextrins, the regioisomeric structures of which were determined by two-dimensional 1H NMR analyses (DQF-COSY and HOHAHA for the assignment of proton signals, ROESY for the determination of interunit relationships). This method is widely applicable to the structure determination of other cyclodextrin derivs.

L17 ANSWER 49 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:409056 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 119:9056
TITLE: Syntheses of subtractively modified 2-chloro-4-nitrophenyl β-maltopentaosides and their application to the differential assay of human alpha-amylases
AUTHOR(S): Tokutake, Shoichi; Oguma, Tetsuya; Tobe, Kouichirou; Kotani, Kazuo; Saito, Kazunori; Yamaji, Nobuyuki
CORPORATE SOURCE: Res. Dev. Div., Kikkoman Corp., Noda, 278, Japan
SOURCE: Carbohydrate Research (1993), 238, 193-213
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Three novel maltopentaosides, 2-chloro-4-nitrophenyl O-(6-deoxy-α-D-xylo-hex-5-enopyranosyl)-(1→4)-tris[O-α-D-glucopyranosyl-(1→4)]-β-D-glucopyranoside (I), 2-chloro-4-nitrophenyl O-(6-deoxy-α-D-glucopyranosyl)-(1→4)-tris[O-α-D-glucopyranosyl)-(1→4)]-β-D-glucopyranoside (II), and 2-chloro-4-nitrophenyl O-(3,6-anhydro-α-D-glucopyranosyl)-(1→4)-tris[O-α-D-glucopyranosyl-(1→4)]-β-D-glucopyranoside (III) were synthesized by chemical and enzymic reactions. Two human alpha-amylases, salivary alpha-amylase (HSA) and pancreatic alpha-amylase (HPA), hydrolyzed I and II with the same specificity, almost entirely at a single D-glucosidic linkage, but had no hydrolytic activity for III. Compound I was hydrolyzed by each of these amylases at an approx. equal rate, while II was hydrlyzed by HSA 4-fold faster than by HPA. Taking advantage of the difference in the hydrolytic rate of II, were developed a new method for the differential assay of these two human alpha-amylases.

L17 ANSWER 50 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:651650 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 117:251650
TITLE: Geometry of carbon-hydrogen···oxygen hydrogen bonds in carbohydrate crystal structures. Analysis of neutron diffraction data
AUTHOR(S): Steiner, Thomas; Saenger, Wolfram
CORPORATE SOURCE: Inst. Kristallogr., Freie Univ., Berlin, W-1000/33, Germany
SOURCE: Journal of the American Chemical Society (1992), 114(26), 10146-54
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Geometrical properties of C-H···O hydrogen bonds in carbohydrate crystal structures are analyzed on the basis of 30 neutron diffraction studies (395 H atoms bonded to C as potential donors, and 328 O atoms at potential acceptors). Only 7% of the H atoms have no contact to O shorter than 3.0 Å. Correlations between hydrogen-bond distances and angles are studied in scatterplots. The shortest interactions tend to be close to linear, but the correlation between distances and angles is much less pronounced than in C-H···O hydrogen bonds. There is a continuous transition from stronger to weaker hydrogen bonds and to nonbonding arrangements; consequently, cutoffs based on van der Waals contact should be discouraged. Intermol. and intramol. interactions are treated sep. Short intramol. contacts, where H and O are separated by only four covalent bonds, occur frequently due to steric restrictions. In β- cyclodextrin inclusion complexes, host/guest C-H···O hydrogen bonds with H···O sepns. as short as 2.39 Å are observed; in water mols. that cannot arrange in the preferred tetrahedral O-H···O hydrogen-bond coordination, the resulting "free" acceptor potential is frequently satisfied by C-

H···O interactions. C-H···O hydrogen bonds are not strong enough to significantly reduce the thermal vibrations of the engaged H atom.

L17 ANSWER 51 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:551239 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 117:151239
TITLE: A complete set of 6-O-activated cyclooligosaccharides having deformed cavities. 3A,6A-Anhydro-6X-O-(2-naphthalenesulfonyl)-β-cyclodextrins
AUTHOR(S): Fujita, Kahee; Kubo, Takayuki; Ishizu, Takashi
CORPORATE SOURCE: Fac. Pharm. Sci., Nagasaki Univ., Nagasaki, 852, Japan
SOURCE: Tetrahedron Letters (1992), 33(29), 4199-200
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 3A,6A-Anhydro-6X-O-(2-naphthalenesulfonyl)-β-cyclodextrins I (X = 3-G) were prepared by the reaction of 3,6-anhydro-β-cyclodextrin with 2-naphthalenesulfonyl chloride in pyridine and were structurally determined

L17 ANSWER 52 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:443955 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 117:43955
TITLE: Chemoenzymic synthesis of modified maltooligosaccharides from cyclodextrin derivatives
AUTHOR(S): Simiand, C.; Cottaz, S.; Bosso, C.; Driguez, H.
CORPORATE SOURCE: Cent. Rech. Macromol. Veg., CNRS, Grenoble, 38041, Fr.
SOURCE: Biochimie (1992), 74(1), 75-9
CODEN: BICMBE; ISSN: 0300-9084
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Me and p-nitrophenyl α-maltooligosaccharides with a 3,6-anhydro ring on the fourth glucosyl residue, starting from the reducing end, were prepared. Enzymic coupling catalyzed by CGTase, between 3A,6A-anhydrocyclomaltohexose and Me or p-nitrophenyl α-D-glucosides led to maltohepatosides. When miglitol, a nojirimycin analog was used, maltooligosaccharides with miglitol at the reducing end were also obtained. After glucoamylase digestion, maltopentaosides with a 3,6-anhydro glucose as antepenultimate unit were produced in good yield. The same Me maltopentaoside was also obtained when 3A,6A-anhydrocyclomaltoheptaose was incubated with Me α-D-glucoside and CGTase, glucoamylase, glucose oxidase and catalase. These results provided new information about the specificity of the subsites of CGTase.

L17 ANSWER 53 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:106630 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 116:106630
TITLE: Preparation of heptakis[6-O-(p-tosyl)]-β-cyclodextrin and heptakis[6-O-(p-tosyl)]-2-O-(p-tosyl)-β-cyclodextrin and their conversion to heptakis(3,6-anhydro)-β-cyclodextrin
AUTHOR(S): Yamamura, Hatsuo; Fujita, Kahee
CORPORATE SOURCE: Fac. Pharm. Sci., Fukuyama Univ., Fukuyama, 729-02, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1991), 39(10), 2505-8
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Heptakis[6-O-(p-tosyl)]-β-cyclodextrin (I) and heptakis[6-O-(p-tosyl)]-2-O-(p-tosyl)-β-cyclodextrin (II) were prepared by the reaction of β-cyclodextrin with p-tosyl chloride in pyridine. I and II were converted to heptakis(3,6-anhydro)-β-cyclodextrin (III) consisting of (1C4) glucose units.

L17 ANSWER 54 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:59812 CAPLUS <<LOGINID::20080331>>

DOCUMENT NUMBER: 116:59812
TITLE: Mechanisms in pyrolysis of polysaccharides. III. Cycloheptaamylose as a model for starch in the pyrolysis of polysaccharides
AUTHOR(S): Lowary, Todd L.; Richards, Geoffrey N.
CORPORATE SOURCE: Wood Chem. Lab., Univ. Montana, Missoula, MT, 59812, USA
SOURCE: Carbohydrate Research (1991), 218, 157-66
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The pyrolysis of cycloheptaamylose was studied as a model for starch. 1,6-Anhydro-β-D-glucopyranose (levoglucosan, LG) and its furanose isomer are the major products from vacuum pyrolysis at 280, 300, and 320°, with combined yield ranging from 38-50% of the substrate dependent on temperature. Pyrolysis in Me2SO at 150° produced LG and glucose as well as glucooligosaccharides of d.p. up to 7, with both reducing and 1,6-anhydro end-groups. A mechanism is postulated in which the first step is the heterolytic scission of a glucosidic linkage to form a linear, 7-membered oligosaccharide having a glucosyl cation in place of the reducing end-group. The cation is stabilized either by intramol. attack of O-6 on the C-1 cation or by intermol. transglycosylation. The former product subsequently yields LG upon scission of a terminal glycosidic linkage.

L17 ANSWER 55 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1991:680410 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 115:280410
TITLE: Per-3,6-anhydro-α-cyclodextrin and per-3,6-anhydro-β-cyclodextrin
AUTHOR(S): Ashton, Peter R.; Ellwood, Paul; Staton, Ian; Stoddart, J. Fraser
CORPORATE SOURCE: Dep. Chem., Univ. Sheffield, Sheffield, S3 7HF, UK
SOURCE: Journal of Organic Chemistry (1991), 56(26), 7274-80
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The synthesis of the per-3,6-anhydro derivs., e.g. I (n = 6, 7) of α- and β-cyclodextrins (CDs) is described starting from the corresponding per-6-O-tosylates. These could only be obtained as pure compds. following repeated HPLC under reversed phase conditions of the crude products isolated after tosylation of α-CD and β-CD in pyridine with p-toluenesulfonyl chloride. Treatment of the per-6-O-tosyl-α- and β-CDs with warm aqueous NaOH solns. (50-60 °C) afforded the per-3,6-anhydro-α- and β-CDs in good yields. The development of an alternative and successful strategy for the synthesis of per-3,6-anhydro-α-CD from the known per-2,3-di-O-benzoyl-6-tosyl-α-CD relies upon the use of Et3N as base in refluxing aqueous MeOH. The per-3,6-anhydro-CDs have been fully characterized by FABMS and NMR spectroscopy. Their specific optical rotations, which are solvent dependent, confirm the chiral nature of these mols. The anhydrides are soluble in such widely different solvents as CH2Cl2 and H2O. There is evidence from FABMS that per-3,6-anhydro-α-CD forms a complex with the triethylammonium cation while per-3,6-anhydro-β-CD solubilizes PhNO2 in D2O solns.

L17 ANSWER 56 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1991:632652 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 115:232652
TITLE: Photolabile, spacer-modified oligosaccharides for probing malto-oligosaccharide binding sites in proteins
AUTHOR(S): Lehmann, Jochen; Ziser, Lothar
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Freiburg, Freiburg/Br., D-7800, Germany
SOURCE: Carbohydrate Research (1990), 205, 93-103
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 115:232652
AB O-Deacylation and S-deacylation of the diastereomers of

2-azido-4-S-benzoyl-4-mercaptobutyl 2,3,4,6-tetra-O-acetyl-α-D-glucopyranoside with NaOMe-MeOH and coupling of the resulting thiol to Me 3,4-anhydro-6-deoxy-β-L-arabino-hex-5-enopyranoside gave the diastereomers of the spacer-modified disaccharide Me 4-S-(3-azido-4-α-D-glucopyranosyloxybutyl)-6-deoxy-4-thio-α-D-xylo-hex-5-enopyranoside (I). Glucosylation of the diastereomers of I with α- cyclodextrin-CGTase and treatment of the products with β-amylase gave the diastereomers of the spacer-modified oligosaccharides Me 4-S-(3-azido-4-α-maltosyloxybutyl)-6-deoxy-4-thio-α-D-xylo-hex-5-enopyranosides (II) and 4-S-(3-azido-4-α-maltotriosyloxybutyl)-6-deoxy-4-thio-α-D-xylo-hex-5-enopyranosides (III). The diastereomers of I each had a good affinity for pancreatic amylase and the maltose-binding protein from Escherichia coli. The affinities of the diastereomers of II and III were higher by at least one order of magnitude.

L17 ANSWER 57 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1990:532599 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 113:132599
TITLE: Synthesis of 1,4-anhydro-2,3,6-tri-O-benzyl-α-D-glucopyranose by cis ring closure of a glycosyl chloride
AUTHOR(S): Sato, Toshihiko; Nakamura, Hiroyuki; Ohno, Yasuo; Endo, Takeshi
CORPORATE SOURCE: Fac. Technol., Tokyo Univ. Agric. Technol., Tokyo, 184, Japan
SOURCE: Carbohydrate Research (1990), 199(1), 31-5
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:132599
AB Cyclomaltoheptaose was benzylated and the product hydrolyzed and converted by HCl-Et2O into the corresponding glycosyl chloride I. Treatment of I with NaH in Me2SO gave mainly glucal II, with title compound III as a byproduct. However, III could be prepared by cis ring closure of I in THF and NaH in good yield.

L17 ANSWER 58 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1990:119263 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 112:119263
TITLE: Specific preparation and structure determination of 3A,3C,3E-tri-O-sulfonyl-β- cyclodextrin
AUTHOR(S): Fujita, Kahee; Tahara, Tsutomu; Yamamura, Hatsuo; Imoto, Taiji; Koga, Toshitaka; Fujioka, Toshihiro; Mihashi, Kunihide
CORPORATE SOURCE: Fac. Pharm. Sci., Fukuyama Univ., Fukuyama, 729-02, Japan
SOURCE: Journal of Organic Chemistry (1990), 55(3), 877-80
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:119263
AB The reaction of β- cyclodextrin with β-naphthylsulfonyl chloride in alkaline aqueous acetonitrile gave only isomer (3A,3C,3E-trisulfonate, 17.8%) of five 3,3,3-tri-O-sulfonyl-β- cyclodextrins. The isomer was converted to 3A,6A:3C,6C:3E,6E-trianhydro-β-cyclodextrin, the structure of which was assigned by comparing its spectral and HPLC data of the trianhydro-β- cyclodextrin with those of all authentic 3,6:3,6:3,6-trianhydro-β-cyclodextrins prepared by the reactions of known 6-tri-O-sulfonylated β- cyclodextrins with aqueous alkali.

L17 ANSWER 59 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1990:7808 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 112:7808
TITLE: Interglucosyl attack of a hydroxyl group on the epoxy ring of 2A,3A-anhydro-(2AS)-α-cyclodextrin. Selective preparation of 3A,2B-anhydro-α- cyclodextrin
AUTHOR(S): Fujita, Kahee; Tahara, Tsutomu; Sasaki, Hideaki; Egashira, Yoshimitsu; Shingu, Tetsuro; Imoto, Taiji; Koga, Toshitaka

CORPORATE SOURCE: Fac. Pharm. Sci., Fukuyama Univ., Higashimura, 729-02, Japan
SOURCE: Chemistry Letters (1989), (5), 917-20
CODEN: CMLTAG; ISSN: 0366-7022
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:7808
AB 2A,3A-Anhydro-(2AS) α- cyclodextrin was isomerized exclusively to 3A,2B-anhydro-α-cyclodextrin by the reaction with aqueous alkaline. This implies the selective and interglucosyl attack of 3F-OH on the epoxide ring.

L17 ANSWER 60 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:213195 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 110:213195
TITLE: Preparation of 1,6-anhydroglucose from (1 → 4)-glucans using microwave technology
AUTHOR(S): Straathof, Adrie J. J.; Van Bekkum, Herman; Kieboom, Antonius P. G.
CORPORATE SOURCE: Lab. Org. Chem., Delft Univ. Technol., Delft, 2628 BL, Neth.
SOURCE: Recueil des Travaux Chimiques des Pays-Bas (1988), 107(11), 647-8
CODEN: RTCPA3; ISSN: 0165-0513
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:213195
AB Heating of starch or other (1 → 4)-glucans in a conventional microwave oven yields 1,6-anhydro-β-D-glucopyranose within a few minutes. Preparation of small amts. of this compound is rapid and easy by this method.

L17 ANSWER 61 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:193321 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 110:193321
TITLE: Preparation of a substituted aromatic oligosaccharide glycoside as a substrate for the direct determination of α-amylase
INVENTOR(S): Chavez, Rodrigo G.; David, Harold; Metzner, Ernest K.; Sigler, Gerald F.; Winn-Deen, Emily S.
PATENT ASSIGNEE(S): Hoechst Celanese Corp., USA
SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 263435	A2	19880413	EP 1987-114327	19871001
EP 263435	A3	19900829		
EP 263435	B1	19950419		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
US 4963479	A	19901016	US 1987-91861	19870904
EP 486470	A1	19920520	EP 1992-101260	19871001
EP 486470	B1	19970129		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
AT 121413	T	19950515	AT 1987-114327	19871001
AT 148501	T	19970215	AT 1992-101260	19871001
JP 63183595	A	19880728	JP 1987-250840	19871006
CA 1336417	C	19950725	CA 1987-548726	19871006
AU 8779414	A	19880414	AU 1987-79414	19871007
AU 597731	B2	19900607		
US 5158872	A	19921027	US 1990-565092	19900810
US 5322954	A	19940614	US 1992-937255	19920903
PRIORITY APPLN. INFO.:			US 1986-916262 A	19861007
			US 1987-91861 A	19870904
			US 1990-565092 A3	19900810

OTHER SOURCE(S): CASREACT 110:193321; MARPAT 110:193321
AB The title glycosides [I; OR on the anomeric C has α-configuration; n = 0,1; R = Q-Q2; R1-R6 = halo, NO2, SO3H, CO2H, CO2R7, R7CO2, CHO; R7 -

lower alkyl], useful as substrates for determining α-amylase, were prepared
A solution of 121 mg 2-chloro-4-nitrophenol and 500 mg 1,2-anhydro
-α-D-maltotriose nonaacetate in PhMe was refluxed 16 h to give 370
mg of the desired 2-chloro-4-nitrophenyl α-D-matotrioside
nonaacetate, which (352 mg) was treated with CHCl3 8, MeOH 20, and concentrated
HCl 2 mL to give 33 mg 2-chloro-4-nitrophenyl-α-D-maltotrioside
(II).

L17 ANSWER 62 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:193236 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 110:193236
TITLE: Malto-oligosaccharide homologs of 3,7-anhydro
-2-azi-1,2-dideoxy-D-glycero-D-gulo-octitol: improved
photoaffinity reagents for labeling the
malto-oligosaccharide-binding protein of Escherichia
coli
AUTHOR(S): Lehmann, Jochen; Steck, Juergen; Weiser, Wolfgang
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Freiburg, Freiburg,
D-7800, Fed. Rep. Ger.
SOURCE: Carbohydrate Research (1988), 184, 113-20
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:193236
AB 3,7-Anhydro-2-azi-1,2-dideoxy-D-glycero-D-gulo-octitol (I) was
synthesized as a β-D-glucopyranosyl analog, which could be converted
into a series of maltooligosaccharide derivs. II (n = 1-5) by
cyclodextrinase-catalyzed glucosyl transfer from α-
cyclodextrin. The pure analogs II (n = 1-5) containing
(1→4)-linked α-D-glucose residues inhibited the uptake of
maltose via the maltose-binding protein-dependent transport system in
Escherichia coli. The concentration of half-maximal inhibition of maltose
transport at 60nM decreases with increasing chain-length of the analog,
reaching a min. at 0.02mM for II (n = 4). 3H-labeled α-
cyclodextrin was prepared by partial oxidation and reduction of the
aldehyde groups with NaB3H4. Radiolabeled II (n = 3) was used to
photolabel the binding site of the maltose-binding protein.

L17 ANSWER 63 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:154723 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 110:154723
TITLE: Synthesis, NMR, and preliminary binding studies of a
new chiral macrocycle from β- cyclodextrin
AUTHOR(S): Hernandez, Arturo; Alonso-Lopez, Manuel; Martin-Lomas,
Manuel; Pascual, Conrad; Penades, Soledad
CORPORATE SOURCE: Inst. Quim. Org., CSIC, Madrid, 28006, Spain
SOURCE: Tetrahedron (1987), 43(22), 5457-60
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:154723
AB The reduction of per-O-diethylboryl-β- cyclodextrin with
ethyldiborane in the presence of 9-borabicyclo[3.3.1]non-9-yl mesylate
afforded, after deboronation and acetylation, the 1,5-anhydro
-D-glucitol deriv I (60%) and a new macrocyclic polyhydroxy ether II (R =
Ac) (30%). The 1H- and 13C-NMR of II (R = Ac, H) were studied. The 13C
T1 values for II (R = H, Ac) indicated a higher degree of internal motion
in comparison to β- cyclodextrin. The binding ability of II
(R = Ac) was investigated using Cram's picrate method.

L17 ANSWER 64 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:135612 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 110:135612
TITLE: Synthesis and mass spectra of 4-O-acetyl-1,5-
anhydro-2,3,6-tri-O-ethyl-D-glucitol and the
positional isomers of 4-O-acetyl-1,5-anhydro
-di-O-ethyl-O-methyl-D-glucitol and 4-O-acetyl-1,5-
anhydro-O-ethyl-di-O-methyl-D-glucitol
AUTHOR(S): Zeller, Samuel G.; D'Ambra, Anello J.; Rice, Michael
J.; Gray, Gary R.
CORPORATE SOURCE: Dep. Chem., Univ. Minnesota, Minneapolis, MN, 55455,
USA

SOURCE: Carbohydrate Research (1988), 182(1), 53-62
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 110:135612

AB Reductive cleavage of fully methylated, partially O-ethylated cellulose or fully ethylated, partially O-methylated cellulose and subsequent acetylation had previously been shown to produce 4-O-acetyl-1,5-anhydro-2,3,6-tri-O-methyl-, -6-O-ethyl-2,3-di-O-methyl-, -3-O-ethyl-2,6-di-O-methyl-, -2-O-ethyl-3,6-di-O-methyl-, -2,3-di-O-ethyl-6-O-methyl-, -2,6-di-O-ethyl-3-O-ethyl-3-O-methyl-, -3,6-di-O-ethyl-2-O-methyl-, and -2,3,6-tri-O-ethyl-D-glucitol. Described herein is the independent synthesis of these derivs., except for the first (which had been reported); and their 1H-NMR spectra, chemical-ionization (NH3) mass spectra, and electron-impact mass spectra are tabulated.

L17 ANSWER 65 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1988:631417 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 109:231417
TITLE: Regiochemical correlation between 6-O-sulfonylated cyclodextrins and 3-O-sulfonylated cyclodextrins via 3,6-anhydrocyclodextrins
AUTHOR(S): Fujita, Kahee; Tahara, Tsutomu; Egashira, Yoshimitsu; Yamamura, Hatsuo; Imoto, Taiji; Koga, Toshitaka; Fujioka, Toshihiro; Mihashi, Kunihide
CORPORATE SOURCE: Fac. Pharm. Sci., Fukuyama Univ., Fukuyama, 729-02, Japan
SOURCE: Chemistry Letters (1988), (4), 705-8
CODEN: CMLTAG; ISSN: 0366-7022
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 109:231417

AB (3R)-2,3-Anhydrocyclodextrins which were prepared from 3-O-sulfonylcyclodextrins were treated with aqueous alkali to give 3,6-anhydrocyclodextrins, which were prepared by the reaction of 6-O-sulfonylcyclodextrins with aqueous alkali. This regiochem. correlation was applicable to regioisomer determination of 3-O-disulfonylcyclodextrins on the basis of the regiochem. of 6-O-disulfonates.

L17 ANSWER 66 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1988:200712 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 108:200712
TITLE: Preparation of 3A,6A-anhydro-β-cyclodextrin and its Taka amylolysis
AUTHOR(S): Fujita, Kahee; Yamamura, Hatsuo; Imoto, Taiji; Tabushi, Iwao
CORPORATE SOURCE: Fac. Pharm. Sci., Fukuyama Univ., Fukuyama, 729-02, Japan
SOURCE: Chemistry Letters (1988), (3), 543-6
CODEN: CMLTAG; ISSN: 0366-7022
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 108:200712

AB 3A,6A-Anhydro-β-cyclodextrin was prepared by the reaction of 6-O-(p-tosyl)-β-cyclodextrin with aqueous alkali. This anhydrocyclodextrin was enzymically hydrolyzed by Taka amylase to give 3'',6''-anhydromaltotetraose exclusively.

L17 ANSWER 67 OF 67 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:586600 CAPLUS <<LOGINID::20080331>>
DOCUMENT NUMBER: 105:186600
ORIGINAL REFERENCE NO.: 105:30037a,30040a
TITLE: The 6A6X-disulfonates of cyclodextrins
AUTHOR(S): Fujita, Kahee
CORPORATE SOURCE: Fac. Pharm. Sci., Kyushu Univ., Fukuoka, 812, Japan
SOURCE: NATO ASI Series, Series C: Mathematical and Physical Sciences (1986), 165(Chem. React. Org. Inorg. Constrained Syst.), 11-16
CODEN: NSCSDW; ISSN: 0258-2023
DOCUMENT TYPE: Journal
LANGUAGE: English

AB 6A6X-disulfonates of α-, β-, and γ- cyclodextrins

were prepared and examined as mimics of enzymes and(or) receptors by studying their guest-binding behaviors. I (the 6A6B-disulfonate of α-cyclodextrin), as well as the 6A6C and 6A6D isomers, were prepared by reaction of α- cyclodextrin (3.1 mM) with mesitylenesulfonyl chloride (27 mM) in pyridine (230 mL) with stirring for 2 h at room temperature The regiochem. of the product isomers was determined by addnl. sulfonation, chemical derivation, and degradation by Taka amylase. II (a capped cyclodextrin derivative) and its 6A6D isomer bound p-nitrophenyl acetate more strongly than did β- cyclodextrin or any of the 6A6X-disulfonated derivs. The flexibility of the 6A6X substituents was thus not favorable for strong guest binding. Progressive substitution of glucose units in β- cyclodextrin with 3,6-anhydro-glucose led to a decrease in the guest-binding ability of the cyclodextrin derivative